

## Addendum

Comer-Warner, Sophie A.; Romeijn, Paul; Gooddy, Daren C.; Ullah, Sami; Kettridge, Nicholas; Marchant, Benjamin; Hannah, David M.; Krause, Stefan

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# Addendum: Thermal sensitivity of CO<sub>2</sub> and CH<sub>4</sub> emissions varies with streambed sediment properties

Sophie A. Comer-Warner <sup>1,3</sup>, Paul Romeijn<sup>1,3</sup>, Daren C. Gooddy <sup>2</sup>, Sami Ullah<sup>1</sup>, Nicholas Kettridge<sup>1</sup>, Benjamin Marchant<sup>2</sup>, David M. Hannah <sup>1</sup> & Stefan Krause<sup>1</sup>

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We would like to clarify the discussion in this Article of the previously published relationships between temperature and greenhouse gas (GHG) emissions. Previous studies identified complex relationships between temperature and GHG emissions or microbial metabolic activity, some of them pointing towards exponential behaviour following Arrhenius law<sup>1–3</sup>. The results of the study presented in this Article specifically highlight non-linearity in the temperature dependency of GHG emissions, which was not exponential. This includes threshold responses of streambed GHG production as a function of streambed warming, with temperature sensitivity varying greatly with substrate, organic matter content, and geological origin. Our results, therefore, demonstrate the relevance of global warming impacts on streambed GHG production; especially due to observed non-linearity in streambed GHG production with increased temperature.

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<sup>1</sup>School of Geography, Earth and Environmental Sciences, University of Birmingham, Edgbaston, Birmingham B15 2TT, UK. <sup>2</sup>British Geological Survey, Maclean Building, Wallingford, Oxfordshire OX10 8BB, UK. <sup>3</sup>These authors contributed equally: Sophie A. Comer-Warner, Paul Romeijn. Correspondence and requests for materials should be addressed to S.A.C.-W. (email: [scx469@bham.ac.uk](mailto:scx469@bham.ac.uk))